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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,809	09/30/2003	David W. Vredenburgh	2834/101	2221
2101	7590	08/10/2006	EXAMINER	
BROMBERG & SUNSTEIN LLP			HOLMES, MICHAEL B	
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BOSTON, MA 02110-1618			ART UNIT	PAPER NUMBER
			2121	

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/675,809	VREDENBURGH ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael B. Holmes	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE (3) MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 30 September 2003.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-66 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1-9, 11-25, 27-41, 43-57 and 59-66 is/are rejected.  
7)  Claim(s) 10,26,42 and 58 is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 01 March 2004 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a))

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12162004/07222005

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_\_



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**Examiner's Detailed Office Action**

**Claim Rejections - 35 USC § 112**

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 15, 17, 31, 33, 47, 49, 63 & 65 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. If the trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of the 35 U.S.C. 112, second paragraph. *Ex parte Simpson, 218 USPQ 1020 (Bd. App. 1982)*. The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. In fact, the value of a trademark would be lost to the extent that it became descriptive of a product, rather than used as an identification of a source or origin of a product. Thus, the use of a trademark or trade name in a claim to identify or describe a material or product would not only render a claim indefinite, but would also constitute an improper use of the trademark or trade name.

## Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-7, 9, 11-13, 18, 21-23, 27-29, 34, 37-39, 41, 43-45, 50, 53-55, 57, 59-61 & 66 are rejected under 35 U.S.C. 102(b) as being anticipated by *Shibao et al.* (USPN 5,355,445).

Regarding claim 1. *Shibao et al.* discloses a computer-aided modeling system [*see* C 2, L 62-68 & C 2, L 4-16], comprising:

a knowledge management system for managing a set of modeling rules; [*see* Abstract & C 8, L 13-18]

a computer-aided design system controlled by the knowledge management system, wherein the knowledge management system generates instructions for modeling a geometric structure (*Examiner interprets geometric structure as one employing e.g., rectangular, straight lines, circles, squares, etc., simple curvilinear motifs or outlines in design*) on the set of modeling rules and communicates the instructions to the computer-aided design system for generating a model of the geometric structure. [*see* Abstract & C 8, L 13-46]

Regarding claim 18. *Shibao et al.* discloses a method for computer-aided design modeling, [see C 2, L 62-68 & C 2, L 4-16] the method comprising:

generating instructions for modeling a geometric structure based on a set of modeling rules; [see C 8, L 13-46] and

communicating the instructions to a computer-aided design system for generating a model of the geometric structure. [see FIG. 1, C 4, L 16-24]

Regarding claim 34. *Shibao et al.* discloses an apparatus for computer-aided design modeling, [see C 1, L 65 to C 2, L 7 & C 3, L 4 & C 7, L 20 & FIG. 8] the apparatus comprising:

a design modeler for generating instructions for modeling a geometric structure based on a set of modeling rules; [see FIG. 9, C 7, L 11-23] and

an interface from the design modeler to a computer-aided design system for communicating the instructions to the computer-aided design system for generating a model of the geometric structure. [see C 7, L 11-23]

Regarding claim 50. *Shibao et al.* discloses an apparatus comprising a computer readable medium having embodied therein a computer program for computer-aided design modeling, [see C 1, L 58-61 & FIG. 8, C 7, L 7-8] the computer program comprising:

means for generating instructions for modeling a geometric structure based on a set of modeling rules; [see C 7, L 47 to C 8, L 46 *Examiner interprets this per paragraph [0016]*] and

means for communicating the instructions to a computer-aided design system for generating a model of the geometric structure. [see C 7, L 47 to C 8, L 46 *Examiner interprets this per paragraph [0016]*]

Regarding claim 66. *Shibao et al.* discloses an apparatus for computer-aided design modeling, [see C 2, L 62-68 & C 2, L 4-16] the apparatus comprising:

means for generating instructions for modeling a geometric structure based on a set of modeling rules; [see C 7, L 47 to C 8, L 46 *Examiner interprets this per paragraph [0016]*] and means for communicating the instructions to a computer-aided design system for generating a model of the geometric structure. [see C 7, L 47 to C 8, L 46 *Examiner interprets this per paragraph [0016]*]

Regarding claim 3. *Shibao et al.* discloses a computer-aided modeling system according to claim 2, wherein the knowledge management system further comprises a knowledge storage application in communication with the knowledge management application for storing the set of rules in a central database and communicating the set of rules to the knowledge management application. [see Abstract & FIG. 1, item 107, C 4, L 23 & C 5, L 1-21]

Regarding claim 4. *Shibao et al.* discloses a computer-aided modeling system according to claim 3, wherein the knowledge management system further comprises a knowledge acquisition application in communication with the knowledge storage application for generating the set of rules and communication the set of rules to the knowledge storage application for storage in the central database. [see FIG. 1, item 107, C 5, L 1-21]

Regarding claims 5, 21, 37 & 53. *Shibao et al.* discloses a computer-aided modeling system further comprising a graphical user interface, wherein the knowledge management system produces a graphical display on the graphical user interface, the graphical display comprising a first portion including information from the knowledge management system and a second portion including information from the computer-aided design system. [see C 7, L 11-23 & C 7, L 47 to C 8, L 18]

Regarding claim 6. *Shibao et al.* describes a computer-aided modeling system according to claim 5, wherein the second portion includes a display window generated by the computer-aided design system. [see C 7, L 11-23 & C 8, 13-18]

Regarding claim 7. *Shibao et al.* discloses a computer-aided modeling system according to claim 6, wherein the display window includes a graphical representation of the geometric structure. [see C 7, L 11-23]

Regarding claims 9, 25, 41 & 57. *Shibao et al.* discloses a computer-aided modeling system wherein the set of rules includes at least one rule relating to a non-geometric attribute of the geometric structure. [see C 9, L 19-31 ... *color code* ...]

Regarding claims 11, 27, 43 & 59. *Shibao et al.* discloses a computer-aided modeling system wherein the at least one rule relating to a non-geometric attribute includes a rule for defining a process. [see C 9, L 19-48 *Examiner interprets process as part of a program*]

Regarding claims 12, 28, 44 & 60. *Shibao et al.* discloses a computer-aided modeling system wherein the set of rules includes at least one rule relating to a class having a plurality of geometric structures. [see C 7, L 24-33]

Regarding claims 13, 29, 45, 61. *Shibao et al.* discloses a computer-aided modeling system wherein the set of rules includes at least one rule relating to a geometric structure defined in the computer-aided design system. [see C 5, L 4-16 & C 7, L 67-68 ... where c101 is a straight line of Fig. 10 ...]

Regarding claims 22, 38 & 54. *Shibao et al.* discloses a method wherein producing a graphical display on a graphical user interface comprises: directing a window display generated by the computer-aided design system to be displayed on the graphical user interface. [see C 7, L 11-23 & L 47-51]

Regarding claims 23, 39 & 55. *Shibao et al.* discloses a method wherein the display window includes a graphical representation of the geometric structure. [see C 7, L 11-23 & L 47-51]

## Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 14, 16, 19, 20, 30, 32, 35, 36, 46, 48, 51, 52, 62 & 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over

*Shibao et al.* (USPN 5,355,445) in view of *Cabral et al.* (USPN 5,455,599).

*Shibao et al.* has been discussed above and does not explicitly describe the limitation an **application programming interface** embodied in claims 2, 20, 36 & 52. However, *Cabral et al.* explicitly describes the limitation of an **application programming interface** embodied in claims 2, 20, 36 & 52.

**Regarding claim 2.** *Cabral et al.* describes a computer-aided modeling system wherein the knowledge management system comprises a knowledge management application in communication with the computer-aided design system through an **application program interface** of the computer-aided design system. **Regarding claim 20.** A method wherein the computer-aided design system comprises an **application program interface**, and wherein communicating the instructions to a computer-aided design system comprises communicating the instructions to the computer-aided design system through the **application program interface**. **Regarding claim 36.** Apparatus according to claim 34, wherein the computer-aided

design system comprises an **application program interface**, and wherein the interface from the design modeler to a computer-aided design system complies with the **application program interface**. **Regarding claim 52.** Apparatus according to claim 50, wherein the computer-aided design system comprises an **application program interface**, and wherein the means for communicating the instructions to the computer-aided design system comprises means for communicating the instructions to the computer-aided design system through the **application program interface**. [see C 6, L 27-32 & C 8, L 15 & C 13, L 26-27] It would have been obvious at the time the invention was made to a persons having ordinary skill in the art to combine *Shibao et al.* with *Cabral et al.* because there is a need for a robust, graphic system that provides a dynamic environment and an extensible graphic specification that can expand to include new applications, new image types and provide for new pixel manipulations. [see C 1,L 59-63]

*Shibao et al.* has been discussed above and does not explicitly describe the limitation a **three-dimensional computer-aided design system** embodied in claims 14, 30, 46 & 62. However, *Cabral et al.* explicitly describes the limitation of a **three-dimensional computer-aided design system** embodied in claims 14, 30, 46 & 62.

Regarding claims 14, 30, 46 & 62. *Cabral et al.* discloses a computer-aided modeling system wherein the computer-aided design system comprises a **three-dimensional computer-aided design system**. [see C 8, L 15-49]

*Shibao et al.* has been discussed above and does not explicitly describe the limitation a **two-dimensional computer-aided design system** embodied in claims 16, 32, 48 & 64. However, *Cabral et al.* explicitly describes the limitation of a **two-dimensional computer-aided design system** embodied in claims 16, 32, 48 & 64.

Regarding claims 16, 32, 48 & 64. *Cabral et al.* discloses a computer-aided modeling system wherein the computer-aided design system further comprises a two-dimensional computer-aided design system. [*see C 8, L 15-49 Examiner interprets two-dimensional as a figure that has length and width but not height e.g., a plane figure such as a rectangle or circle i.e., a geometric shape*]

*Shibao et al.* has been discussed above and does not explicitly describe the limitation **over a communication network** embodied in claims 19, 35 & 51. However, *Cabral et al.* explicitly describes the limitation **over a communication network** embodied in claims 19, 35 & 51. [*see FIG. 1, C 3, L 40-59*]

**Regarding claim 19.** *Shibao et al.* discloses a method according to claim 18, wherein generating instructions for modeling a geometric structure based on a set of modeling rules comprises obtaining the set of modeling rules from a central database **over a communication network**.

**Regarding claim 35.** *Cabral et al.* describes an apparatus according to claim 34, further comprising an interface from the design modeler to a central database **over a communication network** for obtaining the set of modeling rules from the central database. **Regarding claim 51.** *Cabral et al.* describes an apparatus according to claim 50, wherein the means for generating

instructions comprises means for obtaining the set of modeling rules from a central database over a communication network.

7. Claims 15, 31, 47 & 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Shibao et al.* (USPN 5,355,445) in view of *Cabral et al.* (USPN 5,455,599) further in view of *Gadh et al.* (USPN 6,725,184 B1).

*Shibao et al.* and *Cabral et al.* has been discussed above and does not explicitly describe the limitation of **SOLIDWORKS.TM** embodied in claims 15, 31, 47 & 63. However, *Gadh et al.* explicitly describes the limitation of **SOLIDWORKS.TM** embodied in claims 15, 31, 47 & 63.

Regarding claims 15, 31, 47 & 63. *Gadh et al.* describes a computer-aided modeling system wherein the three-dimensional computer-aided design system is **SOLIDWORKS.TM.** [see C 19, L 10] It would have been obvious at the time the invention was made to a persons having ordinary skill in the art to combine *Shibao et al.* and *Cabral et al.* with *Gadh et al.* because in view of the prior research, there is still a need for an efficient way of determining selective disassembly sequences S rather than complete disassembly sequences, and more particularly optimum selective disassembly sequences OS. Preferably, any methods and apparata for determining such sequences should be computationally efficient; should allow analysis of assemblies in up to three dimensions using input geometric models rather than a continuous stream of user inputs; and should be highly automated in all other respects as well. [see C 4, L 24-32]

8. Claims 8, 17, 24, 33, 40, 49, 56 & 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Shibao et al.* (USPN 5,355,445) in view of *Cabral et al.* (USPN 5,455,599) further in view of *Rauscher* (USPAP Pub No.: US 2002/0183982 A1).

*Shibao et al.* and *Cabral et al.* has been discussed above and does not explicitly describe the limitation including controls embodied in claims 8, 24, 40 & 56. However, *Rauscher* explicitly describes the limitation of including controls embodied in claims 8, 24, 40 & 56.

Regarding claims 8, 24, 40 & 56. *Rauscher* describes a computer-aided modeling system wherein the display window further includes controls for manipulating the graphical representation of the geometric structure. [see FIG. 24 “CAD Utility Detail”] It would have been obvious at the time the invention was made to a persons having ordinary skill in the art to combine *Shibao et al.* and *Cabral et al.* with *Rauscher* because it is desirable to establish an effective and comprehensive model that can be used to better plan, build and also manage communication technology infrastructures in a manner that is consistent with the established design and construction industry. It is also desirable to provide a system and method that can streamline the generation of drawings, estimates and specifications of communication infrastructure that is consistent with the established design and construction industry. [see [0006]]

*Shibao et al.* and *Cabral et al.* has been discussed above and does not explicitly describe the limitation of **VISIO.TM** embodied in claims 17, 33, 49 & 65. However, *Rauscher* explicitly describes the limitation of a **VISIO.TM** embodied in claims 17, 33, 49 & 65.

Regarding claims 17, 33, 49 & 65. *Rauscher* describes a computer-aided modeling system wherein the two-dimensional computer-aided design system is **VISIO.TM**.. [see [0208]  
*Examiner interprets two-dimensional as a figure that has length and width but not height e.g., a plane figure such as a rectangle or circle i.e., a geometric shape*]

### Claim Objection(s)

9. Claims 10, 26, 42 & 58 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### Correspondence Information

10. Any inquires concerning this communication or earlier communications from the examiner should be directed to Michael B. Holmes, who may be reached Monday through Friday, between 8:00 a.m. and 5:00 p.m. EST. or via telephone at (571) 272-3686 or facsimile transmission (571) 273-3686 or email [Michael.holmesb@uspto.gov](mailto:Michael.holmesb@uspto.gov).

If you need to send an Official facsimile transmission, please send it to (571) 273-8300.

If attempts to reach the examiner are unsuccessful the Examiner's Supervisor, Anthony Knight, may be reached at (571) 272-3687.

Hand-delivered responses should be delivered to the Receptionist @ (Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22313), located on the first floor of the south side of the Randolph Building.

***Michael B. Holmes***  
Patent Examiner  
Artificial Intelligence  
Art Unit 2121  
United States Department of Commerce  
Patent & Trademark Office

*Wednesday, August 02, 2006*

*MBH*

A handwritten signature in black ink, appearing to read "Michael B. Holmes". The signature is fluid and cursive, with "Michael" on the left, "B." in the middle, and "Holmes" on the right.